

REMARKS

The Office Action mailed August 28, 2003 has been carefully considered by the undersigned attorney on behalf of the inventors and their assignee. Amendments to this application have been presented in this paper in response to the Office Action to clarify aspects of the present invention and to address the objections to the drawings.

In that Office Action, Claims 1 - 4 were allowed (in Paragraph 5 of the Office Action) and Claims 5-6 were rejected under 35 USC 103 as obvious in view of prior art (in Paragraphs 2 - 4 of the Office Action).. The drawings were objected to for an informality (in paragraph 1 of the Office Action).

Included with this Amendment are Figures 1 and 2 with a marking in red to indicate that they reflect prior art. However, this indication is without prejudice to applicants' right to traverse any rejection based on such marking, since these Figures are related to co-workers' art which may not be statutory prior art and a proper basis for a rejection of any claims in the future.

Also included with this Amendment are a Petition for Extension of Time and a Form PTO-2038 authorizing the charge for the extension fee to my VISA credit card.

The Examiner is thanked for the allowance of Claims 1 - 4.

Claims 5 and 6 have been amended to distinguish these claims from the cited prior art. In particular, these claims have been amended to provide a method of multicasting which differs from that which is taught by the cited prior art. These Claims 5 and 6, as amended, have been patterned after allowable Claims 1 - 4 and should be allowable, since Claims 1 - 4 were allowed.

Accordingly, it is urged that all of the claims originally presented in this patent application (Claims 1-6) distinguish from the cited art and are therefore allowable over the art

of record and that the patent application is in condition for allowance so a notice to that effect is respectfully requested. With the correction to the drawings proposed, it is urged that the objection to the drawings have also been overcome to put the application in condition for allowance.

Applicants and their attorney desire to put this patent application in condition for allowance at an early date, especially since allowable subject matter has been identified in this patent application and since all of the rejections in the present Office Action have been addressed and are believed overcome. To assist the Examiner in getting this application in condition for allowance if any questions remain, a collect call to the undersigned is authorized at the Examiner's convenience if any questions or issues remain after consideration of the rationale which has been presented in this Amendment.

Please charge any fees associated with the filing of this paper, including any patent application processing fees as well as the fees for additional claims, to Deposit Account 50-0563 in the name of the assignee of this patent application, International Business Machines Corporation.

Respectfully submitted,
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EXHIBIT

Here are the Claims which have been marked to show the amendments being made. Note that this Exhibit is not believed to be required by the current rules or practice, but was created to assist the attorney in recognizing the changes being made to the claims.

1. (original) A system for processing information units in a distributed processing environment where some but not all of the information units are to be sent to a plurality of different addresses, the system comprising:

a substrate including a plurality of processors, each processor for independently receiving an input information unit and creating an output information unit;

a dispatch unit carried on the substrate and coupled to the plurality of processors for receiving an input information unit and transferring the input information unit to one of said plurality of processors;

a completion unit for receiving the output information units from the plurality of processors and transmitting the output information units in an order corresponding to the input information units were received by the dispatch unit; and

a system for allowing the processing units to generate a plurality of output messages from a single input information unit, the system including an indicator created by the processing unit for each output information unit indicating whether the output information unit is the last output information unit created for the single input information unit, with the completion unit responding to the indicator and processing each message from a single input information unit until it processes an output information unit indicating that it is the last output information unit for the input information unit.

2. (original) A system of the type described in Claim 1 wherein the system for indicating whether the output information unit is the last output information unit for a single input information unit also includes a system for putting a sequence number on each output information unit created from a single input information unit.

3. (original) A system of the type described in Claim 1 further including a system for preventing the output of one processor from being passed from the completion unit until previously received messages from the same data flow have been processed, whereby later information units from the same data flow are not processed from the completion unit before earlier information units from the same data flow.

4. (original) A system of the type described in Claim 2 wherein the sequence number for each multicast message is incremented each time a new destination is provided.

5. (currently amended) A method of generating multiple output message for a single input message in a distributed information processing system, the steps of the method comprising:

providing N processing units where $N > 1$;

assigning each input information unit to one of the N processing units for processing;

processing each input information unit to create an output information unit at the one of the N processing units, with the processing including determining whether the input information unit is to be a unicast message addressed only to one recipient or if the input information unit is to be multicast to a plurality of recipients;

providing a multicast indicator indicating whether the output information unit is a part of a multicast message, and, if the multicast indicator indicates that the output information unit is a part of a multicast message, whether the output information unit is the last multicast message for a given input information unit; and

continuing to process each message from a single input information unit until receiving the indication that the output information unit is the last multicast message from a given input information unit.

6. (currently amended) A method for multicasting messages in a distributed information processing system, the steps of the method comprising:

associating a label field with each message based on the dataflow and adding blank bits to the label field to allow for uniquely identifying each multicast message from the same dataflow;

determining whether a message is a multicast message;

when a multicast message is determined, assigning subsequent occurrence of that message to the same processor;

incrementing the blank bits portion of the label field to distinguish each multicast message from other messages from the same multicast message; and

continuing to process a multicast message from a single message until receiving an indicator that it is the last output from the multicast message.

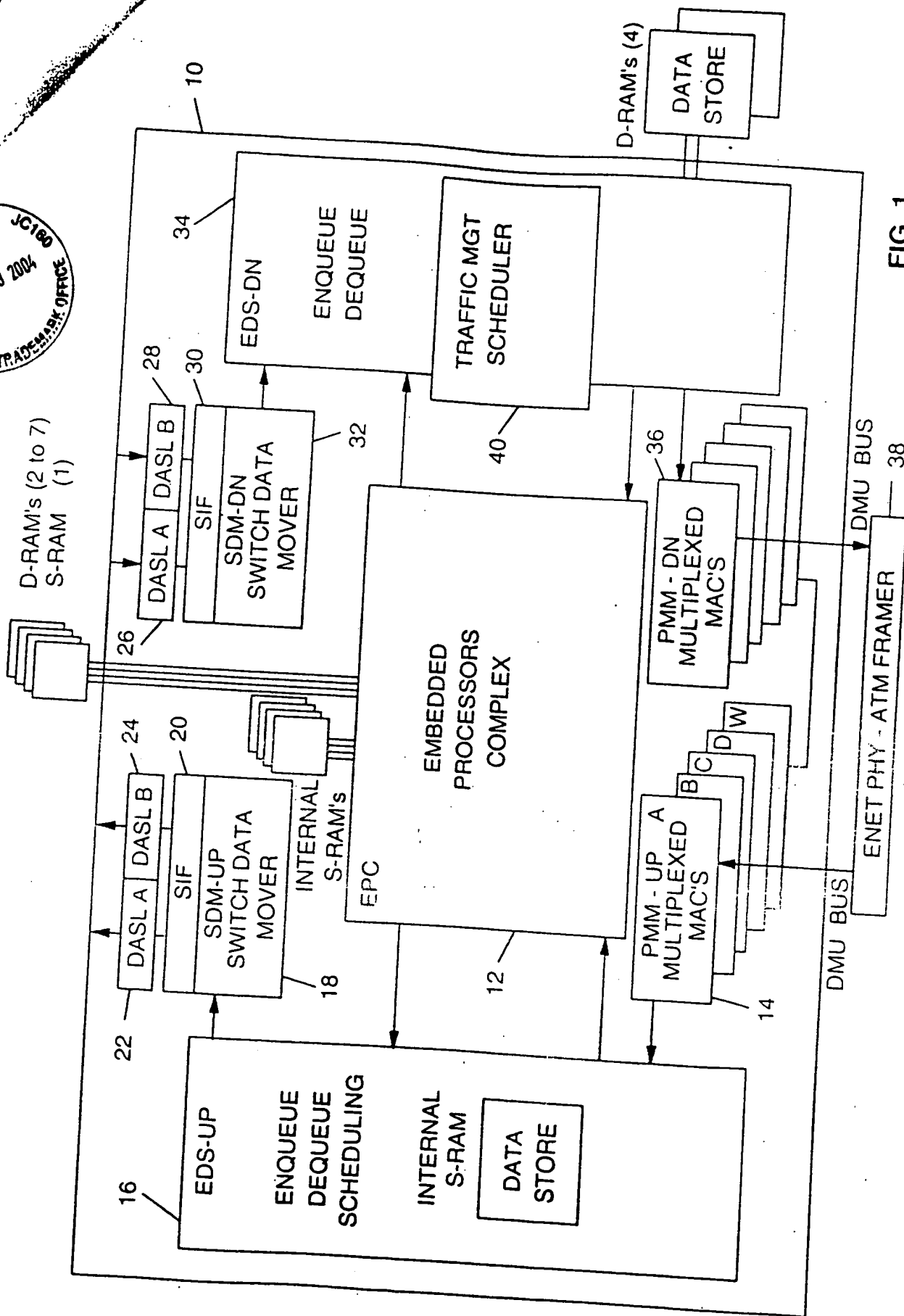
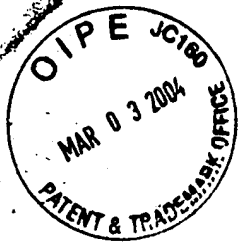


FIG. 1

Prior Art

